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(54) **MOTOR MOUNT**

MOTORHALTER

SUPPORT DU MOTEUR

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(56) References cited:

FR-A1- 2 808 483

FR-A1- 2 883 810

US-A- 5 433 734

US-A- 5 769 377

US-A- 6 021 990

US-A1- 2008 100 113

US-A1- 2008 163 708

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Description

BACKGROUND

[0001] The present disclosure, as currently understood, generally relates to the field of seats and in particular to vehicle seats. More specifically, the present disclosure relates to an adjuster (power track assembly) for a vehicle seat.

[0002] Vehicle seat assemblies are typically provided with a track system that adjusts vehicle seat assembly in the forward and rearward directions. Such adjustment capability is desirable to enable vehicle operators of various sizes to be seated comfortably within the motor vehicle. Generally such track systems include two track assemblies. Each track assembly includes two track members that move relative to one another. Some track systems include a latch mechanism that locks the track members (and therefore the seat assembly) in a locked position relative to one another until the latch mechanism is released. The track members may be selectively moved relative to one another, which enables the occupant of the seat assembly to adjust the seat assembly to a new position.

[0003] Generally vehicle seat assemblies include powered adjusters, such as electric motors for powering adjuster mechanisms, so a user may adjust the various aspects of the vehicle seat. One example is the powered track assembly for adjusting the fore and aft position and/or the vertical position of the seat supported thereby. A powered track assembly facilitates entry (ingress) and exit (egress) from the vehicle, enhances comfort, and/or provides a means to otherwise meet the needs and desires of the user. The powered vehicle seat track assembly typically includes a threaded member (or lead screw) connected between the track members of the track assembly, a motor for actuating the threaded member and a transmission for transferring motion of the motor to adjust the vehicle seat track members of the track assembly. In one type of track assembly arrangement, the lead screw may generally be fixed to the track members such that it does not rotate. A transmission is provided on the lead screw and includes a worm gear assembly rotatably coupled to the lead screw. A motor is connected to the worm gear to rotate it and causing the transmission to translate along the fixed, non-rotating lead screw to cause relative motion of the track members of the track assembly to adjust the vehicle seat.

[0004] FR 2 883 810 discloses an assembly having a crosspiece connecting two parallel guide rails comprising screw and nut driving mechanisms, where the crosspiece is formed of a cut and folded sheet. The crosspiece carries an electrical motor which drives the mechanisms by flexible connections having flexible rotating shafts that are surrounded by a flexible sheath integrated with the crosspiece, without a clearance.

[0005] FR 2 808 483 discloses an motorized seat adjusting mechanism for automobiles, in which the motor

casing assembly is simple and rapid using two casing projections rotating in two visco-elastic sleeves. The two casing projections are located so as to rotate in first and second visco-elastic sleeves which are elastically fitted in first and second cradles formed at the ends of a support. The cradles and sleeves are shaped so as to immobilize angularly, axially and radially the casing with respect to a central axis. The casing is uniquely connected to the support via the sleeves. The motorized seat adjusting mechanism comprises a motor and casing having two opposite rigid projections aligned along a central axis. One of the projections passes through a rotating part and the other through a support on which the motor casing is fixed. Each of the visco-elastic sleeves is fitted with a collar inserted between one of the support cradles so as to axially immobilize the casing on the support. The first and second cradles each have an internal cylindrical gate, sensibly identical to the external diameter of the sleeves, and an opening whose width is less than the external diameter of the sleeves so as to allow clipping and radial immobilization of the casing on the support. The cradles have also slots cooperating with a rib formed in the external surface of the sleeves so as to angularly immobilize the casing on the support.

[0006] US 2008/10163708 A1 discloses a track system of the type used to adjust the position a supported element such as vehicular seat including a pair of base rails that slidably interact with a respective pair of driven rails. A transverse rail is attached to each of the driven rails so that the driven rails slide together as a unit. A motor is supported on the transverse rail and includes a pair of drive shafts emanating from either end. The drive shafts carry on their distal ends' respective worm gears which are contained within a transmission assembly. The worm gears mesh with external teeth on respective drive nuts which interact with a lead screw that can be oriented to either remain stationary relative to the base rails or can be rotatably fixed within the driven rails. The drive nut is prevented from causing objectionable noise and premature wear in operation by the inclusion of one or two compressible washers.

[0007] There remains a significant and continuing need to provide an improved powered seat track assembly and vehicle seat that facilitates installation and mounting, enhances performance, and has a lower manufacturing cost.

SUMMARY

[0008] According to the invention, a bracket for use in mounting an adjuster motor to a vehicle seat assembly is disclosed. The bracket includes a body portion having a first end and a second end for attachment to the vehicle seat assembly, a recess is provided and located in the body portion for housing a motor, an attachment rib extends substantially vertically from the body portion and is at least partially located in the recess, the attachment rib for use in attaching and securing the motor within the

recess; and an attachment member extending horizontally from the body portion and into the recess, the attachment member for insertion into the motor and interlocking the motor thereto. According to the invention the attachment member projects horizontally from a vertical surface area of the recess and is arranged for insertion into a recess in the motor and has a triangular vertical flange with an angled surface, a first triangular horizontal flange with an angular surface, a second triangular horizontal flange with an angular surface, and a trapezoidal underside surface, wherein the attachment member is made of an elastomeric or rubber material

[0009] In another exemplary embodiment, there is disclosed a vehicle seat assembly having a seat base frame having a first and second side frame member, the first and second side frame member positioned parallel to one another; a track assembly coupled to the first and second side frame member, the track assembly having a first upper track member in slidable engagement with a first lower track member and a second upper track member in slidable engagement with a second lower track member; a bracket having a first end coupled to the first upper track member and a second end coupled to the second upper track member; and a motor housed within the bracket, the motor for adjusting the fore and aft position of the first and second upper track member relative to the first and second lower track member.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

FIG. 1 is a perspective view of a vehicle having a seat assembly according to an exemplary embodiment;

FIG. 2 is a perspective view of a seat assembly according to an exemplary embodiment;

FIG. 3 is a top perspective view of a vehicle seat track assembly according to an exemplary embodiment;

FIG. 4 is an exploded, perspective view of a vehicle seat track assembly having a motor mount bracket according to an exemplary embodiment;

FIG. 5 is an exploded perspective view of the motor mount bracket and motor as shown in FIG. 4 according to an exemplary embodiment;

FIG. 6A is a perspective view of the motor mount bracket including a motor of FIG. 4 and 5 according to an exemplary embodiment;

FIG. 6B is a perspective view of the motor mount bracket of FIG. 6A also having a memory sensor according to an exemplary embodiment;

FIG. 6C is a top view of the motor mount bracket of FIG. 6B according to an exemplary embodiment;

FIG. 6D is a side view of the motor mount bracket of FIG. 6B according to an exemplary embodiment;

FIG. 7A is a perspective view of an alternate motor mount bracket design including a motor according to an alternate exemplary embodiment;

FIG. 7B is a top view of the motor mount bracket of FIG. 7A according to an exemplary embodiment;

FIG. 7C is a cross-sectional view along the A-A line of the motor mount bracket of FIG. 7B according to an exemplary embodiment;

FIG. 7D is a cross-sectional view along the B-B line of the motor mount bracket shown in FIG. 7B according to an exemplary embodiment;

FIG. 7E is a side view of the motor mount bracket shown in FIG. 7A according to an exemplary embodiment;

FIG. 7F is an end view of the motor mount bracket of FIG. 7A according to an exemplary embodiment;

FIG. 8 is a partial, top view of the motor mount bracket of FIG. 7A according to an exemplary embodiment;

FIG. 9 is a partial, perspective view of the motor mount bracket of FIG. 8 according to an exemplary embodiment;

FIG. 10A is a partial, perspective view of an attachment member of the motor mount bracket according to an exemplary embodiment;

FIG. 10B is a partial, side view of the attachment member of FIG. 10A according to an exemplary embodiment;

FIG. 10C is a partial, top view of the attachment member of FIG. 10A according to an exemplary embodiment;

FIG. 11 is a partial, top view of a motor mount bracket including a motor attached thereto according to an exemplary embodiment; and

FIG. 12 is a partial, perspective view of a motor mount bracket including a motor attached thereto according to an exemplary embodiment.

DETAILED DESCRIPTION

[0011] Referring generally to the figures and in partic-

ular to FIG. 1, a vehicle 10 having a vehicle seat 12 according to an exemplary embodiment is shown. While the vehicle 10 shown is a 4-door sedan, it should be understood that the seat 12 may be used in a mini-van, sport utility vehicle or any other means in or by which someone travels or something is carried or conveyed for any market or application including everything from office seating and transportation to planes and space travel and everything in between. The vehicle seat 12 shown includes a seat back 14 and a seat base 16. One exemplary embodiment of a seat structure 12 is shown in FIG. 2. The seat 12 may include a head restraint 18 and a seat base portion (sub-assembly) 20. The head restraint 18 extends upward from the seat back 14 and is configured to restrain the head of an occupant during an impact. The seat base portion 20 may be configured to allow the seat 12 to be selectively positioned (manually or motor driven) relative to the vehicle interior.

[0012] Referring now to FIGS. 3 and 4, a seat base sub-assembly 20 is shown. The seat base sub-assembly 20 includes a first (inboard) seat base side member 22, a second (outboard) seat base side member 24, a first (front) cross tube member 26, a second (rear) cross tube member 28, a track assembly 30, a motor 32, and a motor mount bracket 34. The track assembly 30 includes a first (inboard) and second (outboard) upper rail 36, 38 and a first (inboard) and second (outboard) lower rail 40, 42. The first and second seat base side members 22, 24 are coupled together via the first and second cross tube members 26, 28 to form the seat base frame 44. The first and second seat base side members 22, 24 are also coupled to the first and second upper track members (rails) 36, 38, respectively. The first and second upper track members 36, 38 are slidably coupled to the first and second lower track members 40, 42 which, in turn, are designed to be coupled to the vehicle 10 or to brackets 45 that are designed to be coupled to the vehicle 10 (e.g., vehicle floor, etc.). The motor mount bracket 34 is coupled at its first (inboard) end 46 to the first upper track member 36 and coupled at its second (outboard) end 48 to the second upper track member 38, such that the motor mount bracket 34 is substantially perpendicular to both the first and second seat base side members 22, 24. The motor mount bracket 34 is coupled at its first and second ends 46, 48 using any appropriate fastener 50 such as the bolts as shown in FIG. 4 but any known or appropriate coupling device may be utilized. The motor 32 is housed at the first (inboard) end 46 of the motor mount bracket 34 (alternatively, the motor 32 may be housed anywhere along the motor mount bracket 34 including, but not limited to, the outboard end 48 of the motor mount bracket 34), such that the motor 32 and cable 52 are positioned horizontally aligned along a longitudinal axis of the motor mount bracket 34 and the motor 32 is snugly coupled to the motor mount bracket 34.

[0013] Referring now to FIGS. 5 through 7F, a motor mount bracket 34 for receiving a motor 32 is shown. The motor mount bracket 34 has an elongated body portion

53 and includes a motor recess 54 and an attachment rib 56 (C-clip opening) for receiving the motor 32 on the motor mount bracket 34. The motor 32 is positioned such that at least a portion of the motor 32 extends toward the motor recess 54 and further such that one end of the motor 32 couples to (or snap fits with such as wherein the material is designed to have an interference fit therewith) into the attachment rib 56 (C-clip opening) to snugly secure the motor 32 in position on the motor mount bracket 34. The motor recess 54 may be designed to house a variety of suitable motors 32 (e.g., Mitsuba, Asmo, etc.) having a variety of shapes and sizes. The motor mount bracket 34 includes a plurality of apertures 58 for coupling/mounting to other components (e.g., track assembly 30, etc.). According to one exemplary embodiment, apertures 58 on the first (inboard) end 46 of the motor mount bracket 34 may be used to receive fasteners 50 for coupling the motor mount bracket 34 to the first (inboard) upper track member 36 and apertures 58 on the second (outboard) end 48 of the motor mount bracket 34 may be used to receive fasteners 50 for coupling the motor mount bracket 34 to the second (outboard) upper track member 38. The motor mount bracket 34 may also include additional apertures 58 (e.g., along the lateral sides, bottom surface area, etc.) of the motor mount bracket 34 for coupling to still other components (e.g., vehicle seat assembly, etc.). The motor mount bracket 34 also includes a plurality of laterally extending, longitudinal motor cable ribs 60 protruding vertically upward from and spaced-apart along the length of a top surface area of the motor mount bracket 34. These motor cable ribs 60 provide rigidity to the motor mount bracket 34 and enable a motor 32 (having various shapes and sizes) and a cable 52 (within a housing) to be placed snugly into position and thereby enhance performance of the vehicle seat track assembly 30 (e.g., reduce noise, etc.). The motor mounting bracket may also include additional recesses 78 for additional components (e.g., a memory sensor 80, etc.), as shown in FIG. 6B.

[0014] Referring now to FIGS. 8 and 9, a motor mount bracket 34 according to an exemplary embodiment is shown. The motor mount bracket 34 further includes a pair of motor attachment members 62 (isolators, supports, darts) projecting from the vertical surface area (wall) of the recess 54. According to an exemplary embodiment, the motor attachment members 62 (isolators, supports, darts) are formed integrally with the motor mount bracket 34. Alternatively, it is understood that the motor attachment members 62 (isolators, supports, darts) may be formed separately from the motor mount bracket 34 and may be suitably coupled with the motor mount bracket 34. While two motor attachment members 62 are shown, it is noted that the motor mount bracket 34 may be designed to include any suitable number of motor attachment members 62 (e.g., one or more). The motor mount bracket 34 also includes an opening 66 on the vertical surface area (wall) 67 of the recess 54 for the shaft 66 of the motor 32 to extend toward the track mem-

bers 36, 40 and connect therewith.

[0015] Referring now to FIGS. 10A through 10C, a motor attachment member 62 (isolators, supports, darts) is shown. The motor attachment member 62 is generally triangular or arrow-shaped having a triangular vertical flange 68, a first triangular horizontal (lateral) flange 70, a second triangular horizontal (lateral) flange 72, and a trapezoidal underside surface 74. The vertical flange 68, the first horizontal flange 70, and the second horizontal flange 72 each have an angled surface 69, 71, 73 (e.g., the hypotenuse of each triangular flange) which extends angularly from the front end towards the rear end of the motor attachment member 62. The motor attachment members 62 are inserted into recesses 76 in the motor 32 to provide a biasing force therewith and to snugly fit and hold the motor 32 on the motor mount bracket 34 and aligned with the motor recess 54 and the mounting rib 56. The motor attachment member 62 is preferably made of an elastomeric or rubber material (e.g., in-mold plastic, etc.) and has a number of advantages including, *inter alia*, enabling angled installation of the horizontal motor 32 on the motor mount bracket 34 and thus enabling rotation of the motor 32 to the horizontal, installed position while ensuring retention of the motor 32 (e.g., allowing the drive cables to recess into their mating components, etc.), and thereby retaining the motor 32 more effectively (e.g., preventing disengagement of the motor from the assembly). It is contemplated that the arrangement shown will allow elimination of a quality check for mis-positioned isolators associated with prior designs and thereby significantly reducing costs (e.g., rubber isolators, screws, etc.). The motor mount bracket 34 and motor attachment member 62 also provide a reduced contact surface to the motor 32 to thereby reduce vibration energy transfer and thereby enhancing acoustic noise performance (e.g., limiting and/or preventing buzzes, squeaks and rattles (*a/k/a* as BSR)) of the power seat track 30. Further, the motor mount bracket 34 and motor attachment members 62 provide for more efficient and cost-effective manufacturing and assembly of the vehicle power seat track assembly 30 thereby also reducing overall cost.

[0016] FIGS. 11 and 12 show a motor mount bracket 34 having a motor 32 positioned therein. The motor 32 is positioned horizontally along the length of the recess 54 and snugly fits into place via the motor attachment members (darts) 62.

[0017] It is also important to note that the construction and arrangement of the elements of the vehicle seat as shown in the preferred embodiment is illustrative only. Although the present innovations have been described in detail in this disclosure, those skilled in the art who review this disclosure will readily appreciate that many modifications are possible (e.g., variations in sizes, dimensions, structures, shapes and proportions of the various elements, values of parameters, mounting arrangements, use of materials, colors, orientations, etc.) as long they remain within the scope of the appended claims.

Claims

1. A bracket (34) for mounting a motor (32) for driving a motor cable (52) for use in a vehicle seat assembly (20), the bracket (34) comprising:

a longitudinally extending body portion (53) having a first end (46) and a second end (48), the first and second ends (46, 48) for attaching the bracket (34) to the vehicle seat assembly (20), the body portion (53) having a recess (54) for receiving the motor (32);
a laterally extending attachment rib (56) projecting upwardly from the body portion (53) and located in the recess (54); and
at least one attachment member (62), wherein in use one end of the motor (32) is secured to the attachment rib (56) and an opposed end of the motor (32) is secured to the attachment member (62) for coupling the motor (32) to the bracket (34),

characterized in that the attachment member (62) projects horizontally from a vertical surface area of the recess (54) and is arranged for insertion into a recess (76) in the motor (32) and has a triangular vertical flange (68) with an angled surface (69), a first triangular horizontal flange (70) with an angular surface (71), a second triangular horizontal flange (72) with an angular surface (73), and a trapezoidal underside surface (74), wherein the attachment member (62) is made of an elastomeric or rubber material.

2. The bracket (34) of Claim 1, wherein the attachment rib (56) is substantially C-shaped to secure the motor (32) in position via an interference fit.
3. The bracket (34) of Claim 1, wherein the bracket (34) includes a plurality of motor cable ribs (60) spanning the body portion (53) of the bracket (34) for securing the motor cable (52).

4. A vehicle seat assembly (20), comprising:

a seat base frame (44) having a first and second side frame member (22, 24), the first and second side frame member (22, 24) positioned parallel to one another;

a track assembly (30) coupled to the first and second side frame member (22, 24), the track assembly (30) having a first upper track member (36) in slidable engagement with a first lower track member (40) and a second upper track member (38) in slidable engagement with a second lower track member (42);

a bracket (34) according to one of the claims 1 to 3 whose first end (46) is coupled to the first

upper track member (36) and whose second end (48) is coupled to the second upper track member (38); and
 a motor (32) housed within the bracket (34) for adjusting the fore and aft position of the first and second upper track member (36, 38) relative to the first and second lower track member (40, 42) wherein one end of the motor (32) is secured to the attachment rib (56) and opposed end of the motor (32) is secured to the attachment member (62).

Patentansprüche

1. Halterung (34) zur Montage eines Motors (32) für das Betreiben eines Motorkabels (52) zur Verwendung in einer Fahrzeugsitzanordnung (20), wobei die Halterung (34) folgendes umfasst:

einen sich längs erstreckenden Körperabschnitt (53) mit einem ersten Ende (46) und einem zweiten Ende (48), wobei das erste und das zweite Ende (46, 48) zum Befestigen der Halterung (34) an der Fahrzeugsitzanordnung (20) vorgesehen sind, wobei der Körperabschnitt (53) eine Vertiefung (54) zur Aufnahme des Motors (32) aufweist,
 eine sich quer erstreckende Befestigungsrippe (56), die vom Körperabschnitt (53) aus aufragt und in der Vertiefung (54) angeordnet ist, und mindestens ein Befestigungselement (62), wobei im Gebrauch ein Ende des Motors (32) an der Befestigungsrippe (56) fixiert ist und ein entgegengesetztes Ende des Motors (32) am Befestigungselement (62) fixiert ist, um den Motor (32) mit der Halterung (34) zu koppeln,
dadurch gekennzeichnet, dass das Befestigungselement (62) horizontal aus einem vertikalen Flächenbereich der Vertiefung (54) ragt und dafür angeordnet ist, in eine Vertiefung (76) im Motor (32) eingesetzt zu sein, sowie eine dreieckige vertikale Nase (68) mit einer abgewinkelten Fläche (69), eine erste dreieckige horizontale Nase (70) mit einer abgewinkelten Fläche (71), eine zweite dreieckige horizontale Nase (72) mit einer abgewinkelten Fläche (73) und eine trapezförmige Unterseitenfläche (74) aufweist, wobei das Befestigungselement (62) aus einem Elastomer- oder Kautschukmaterial besteht.

2. Halterung (34) nach Anspruch 1, wobei die Befestigungsrippe (56) im Wesentlichen C-förmig ist, um den Motor (32) über einen Eingriffssitz in Position zu fixieren.
3. Halterung (34) nach Anspruch 1, wobei die Halte-

rung (34) mehrere Motorkabelrippen (60) enthält, die den Körperabschnitt (53) der Halterung (34) zum Fixieren des Motorkabels (52) überspannen.

4. Fahrzeugsitzanordnung (20), Folgendes umfassend:

einen Sitzgrundrahmen (44) mit einem ersten und einem zweiten Seitenrahmenelement (22, 24), wobei das erste und das zweite Seitenrahmenelement (22, 24) parallel zueinander angeordnet sind,
 eine Schienenanordnung (30), die an das erste und das zweite Seitenrahmenelement (22, 24) gekoppelt ist, wobei die Schienenanordnung (30) ein erstes oberes Schienenelement (36) in gleitfähigem Eingriff mit einem ersten unteren Schienenelement (40) und ein zweites oberes Schienenelement (38) in gleitfähigem Eingriff mit einem zweiten unteren Schienenelement (42) aufweist,
 eine Halterung (34) nach einem der Ansprüche 1 bis 3, deren erstes Ende (46) an das erste obere Schienenelement (36) gekoppelt ist und deren zweites Ende (48) an das zweite obere Schienenelement (38) gekoppelt ist; und
 ein Motor (32), der in der Halterung (34) untergebracht ist, um die vordere und hintere Position des ersten und des zweiten oberen Schienenelements (36, 38) im Verhältnis zum ersten und zweiten unteren Schienenelement (40, 42) einzustellen, wobei ein Ende des Motors (32) an der Befestigungsrippe (56) fixiert ist und das entgegengesetzte Ende des Motors (32) am Befestigungselement (62) fixiert ist.

Revendications

1. Support (34) pour le montage d'un moteur (32) destiné à entraîner un câble de moteur (52) pour une utilisation dans un ensemble de siège de véhicule (20), le support (34) comprenant:

une partie de corps (53) s'étendant longitudinalement ayant une première extrémité (46) et une deuxième extrémité (48), les première et deuxième extrémités (46, 48) étant destinées à fixer le support (34) à l'ensemble de siège de véhicule (20), la partie de corps (53) ayant un évidement (54) destiné à recevoir le moteur (32);
 une nervure de fixation (56) s'étendant latéralement faisant saillie vers le haut à partir de la partie de corps (53) et située dans l'évidement (54); et
 au moins un organe de fixation (62), et lors de l'utilisation, une extrémité du moteur (32) étant

attachée à la nervure de fixation (56) et une extrémité opposée du moteur (32) étant attachée à l'organe de fixation (62) pour accoupler le moteur (32) au support (34),

caractérisé en ce que l'organe de fixation (62) fait saillie horizontalement à partir d'une surface verticale de l'évidement (54) et est agencé en vue de l'insertion à l'intérieur d'un évidement (76) dans le moteur (32) et a une aile verticale triangulaire (68) pourvue d'une surface inclinée (69), une première aile horizontale triangulaire (70) pourvue d'une surface angulaire (71), une deuxième aile horizontale triangulaire (72) pourvue d'une surface angulaire (73) et une surface inférieure trapézoïdale (74), l'organe de fixation (62) étant constitué d'un matériau élastomère ou en caoutchouc.

moteur (32) étant attachée à l'organe de fixation (62).

2. Support (34) selon la revendication 1, dans lequel la nervure de fixation (56) est sensiblement en forme de C pour immobiliser le moteur (32) en position au moyen d'un ajustement serré.
3. Support (34) selon la revendication 1, dans lequel le support (34) comporte une pluralité de nervures de câble de moteur (60) s'étendant sur la partie de corps (53) du support (34) pour attacher le câble de moteur (52).
4. Ensemble de siège de véhicule (20), comprenant :
 - un cadre de base de siège (44) ayant un premier et un deuxième organe de cadre latéral (22, 24), les premier et deuxième organes de cadres latéraux (22, 24) étant positionnés parallèlement l'un à l'autre ;
 - un ensemble de glissière (30) accouplé aux premier et deuxième organes de cadres latéraux (22, 24), l'ensemble de glissière (30) ayant un premier organe de glissière supérieur (36) en engagement coulissant avec un premier organe de glissière inférieur (40) et un deuxième organe de glissière supérieur (38) en engagement coulissant avec un deuxième organe de glissière inférieur (42) ;
 - un support (34) selon l'une quelconque des revendications 1 à 3, dont la première extrémité (46) est accouplée au premier organe de glissière supérieur (36) et dont la deuxième extrémité (48) est accouplée au deuxième organe de glissière supérieur (38) ; et
 - un moteur (32) logé à l'intérieur du support (34) pour ajuster la position avant et arrière des premier et deuxième organes de glissière supérieurs (36, 38) par rapport aux premier et deuxième organes de glissière inférieurs (40, 42), une extrémité du moteur (32) étant attachée à la nervure de fixation (56) et l'extrémité opposée du

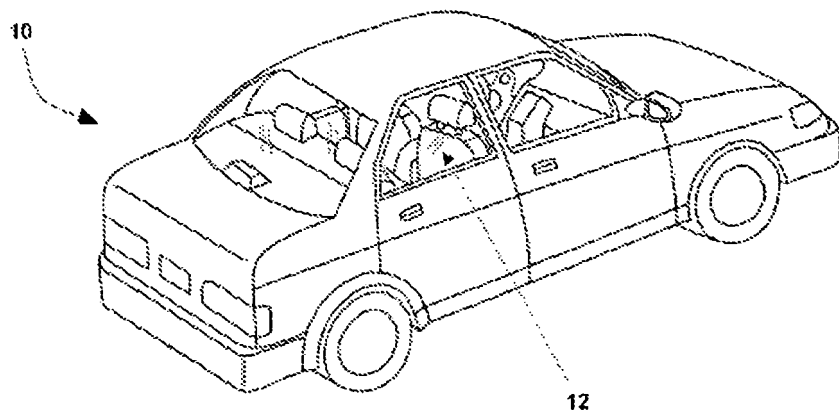


FIG.1

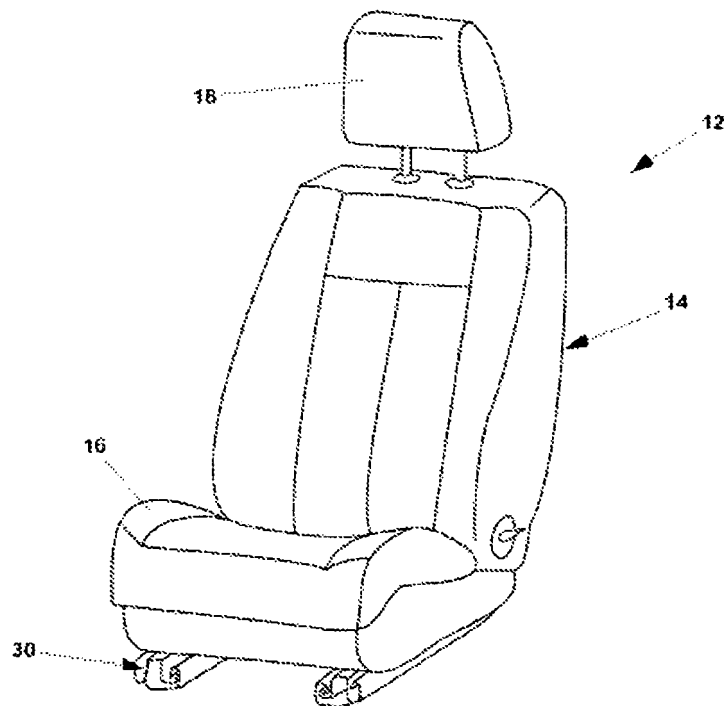


FIG.2

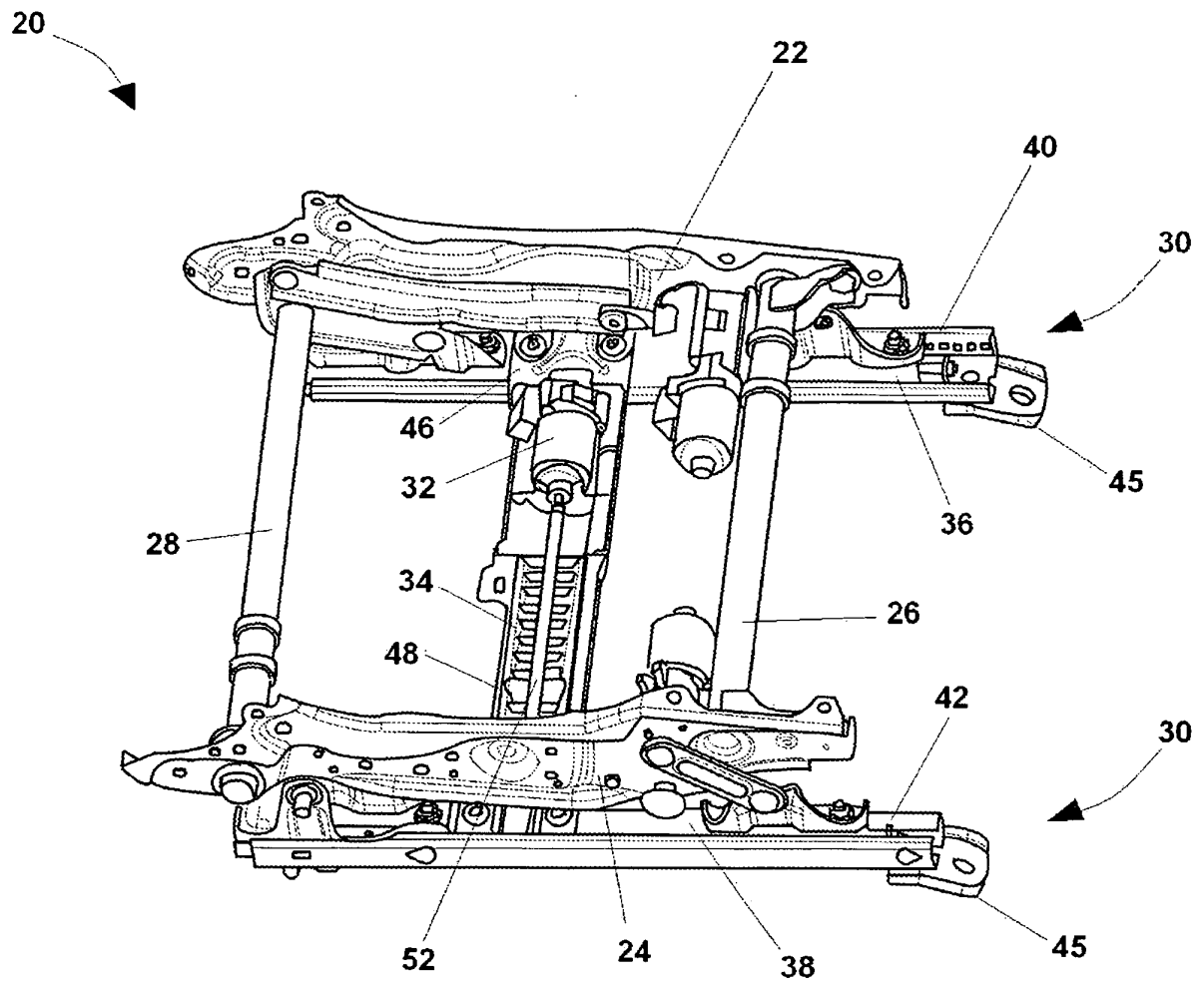


FIG.3

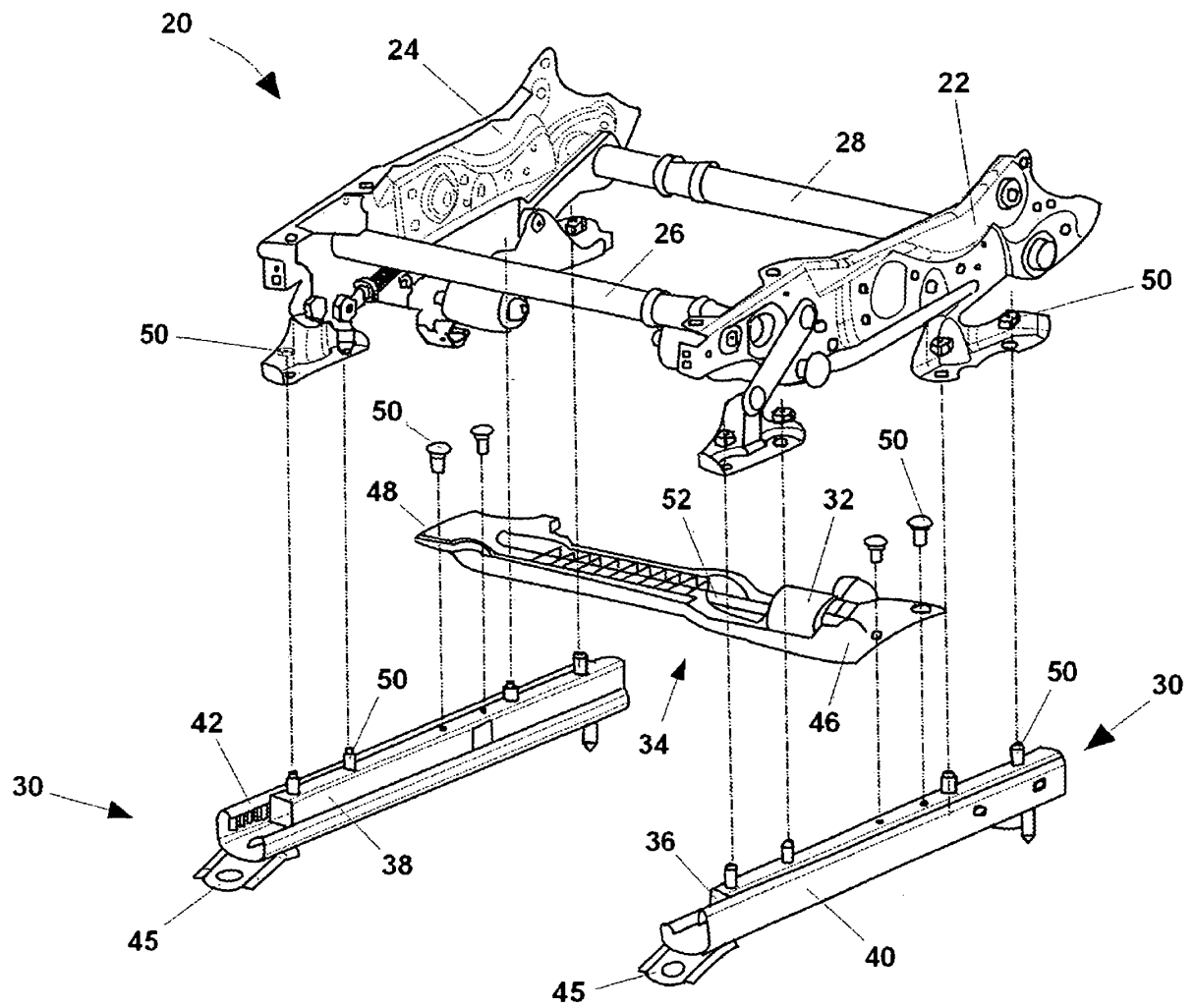


FIG.4

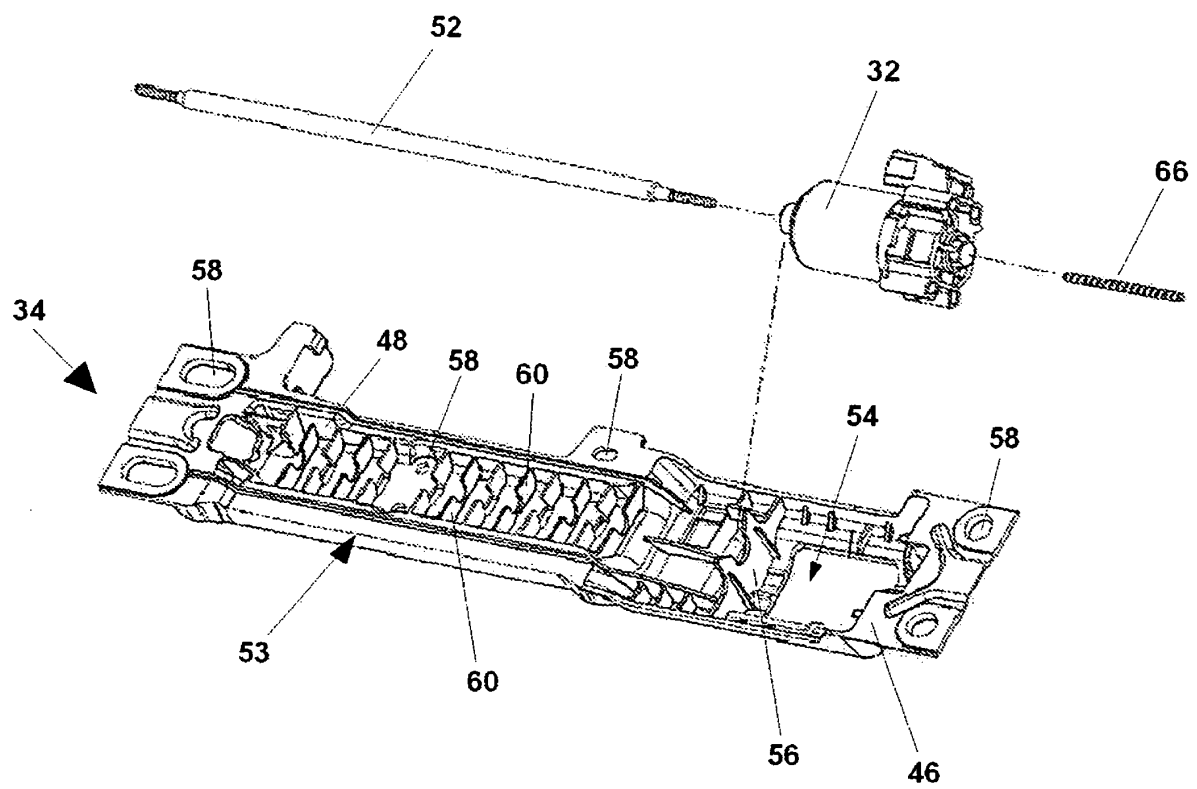


FIG.5

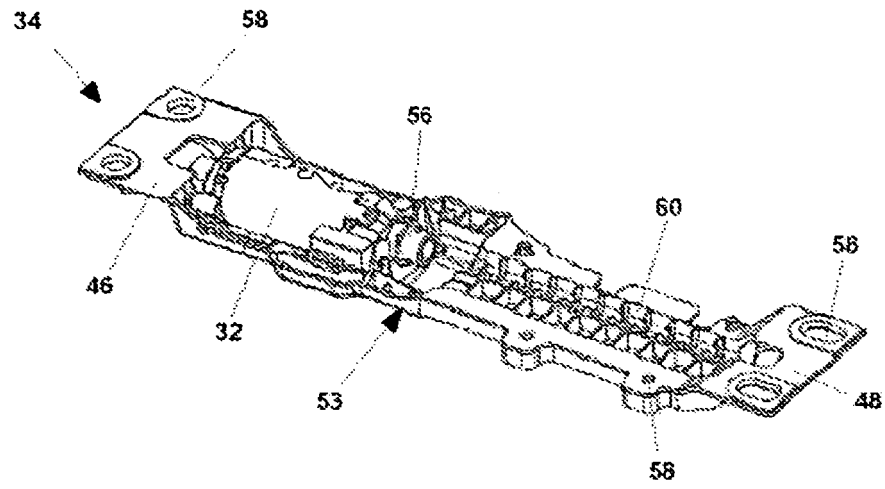


FIG. 6A

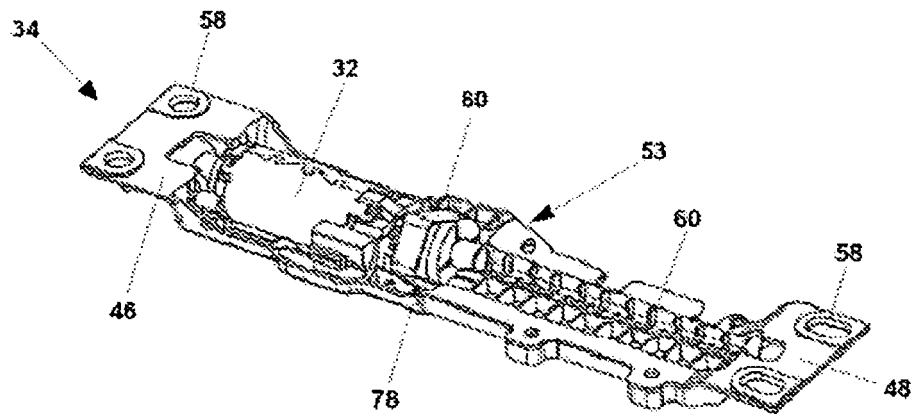


FIG. 6B

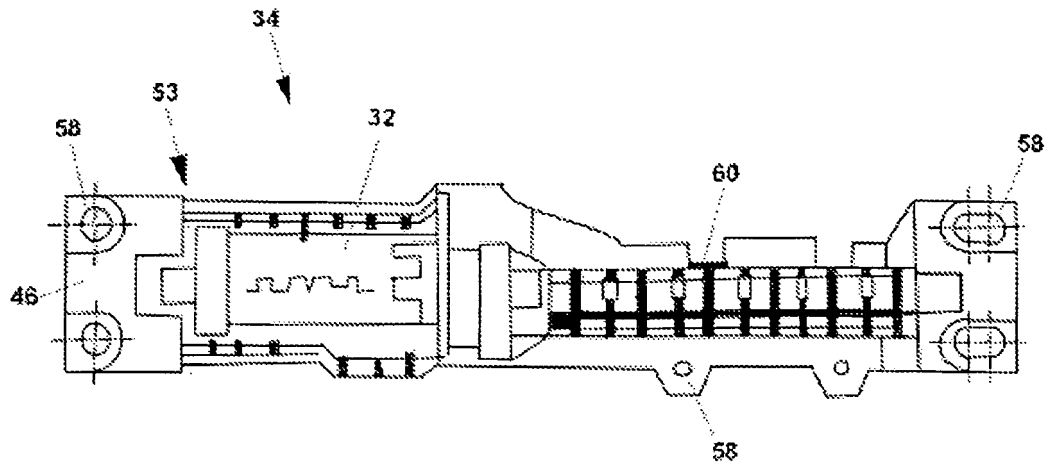


FIG. 6C

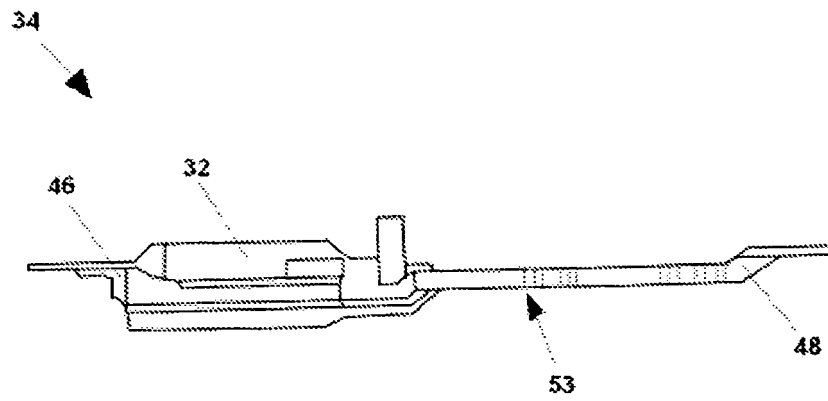


FIG. 6D

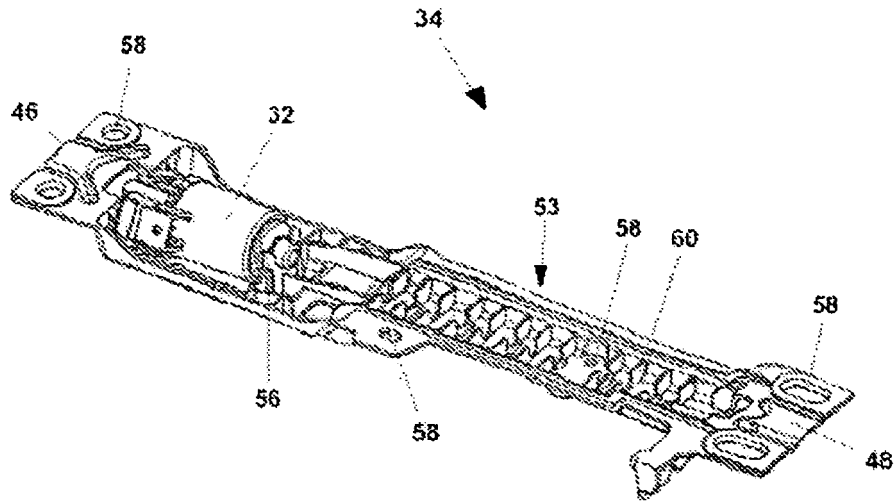


FIG. 7A

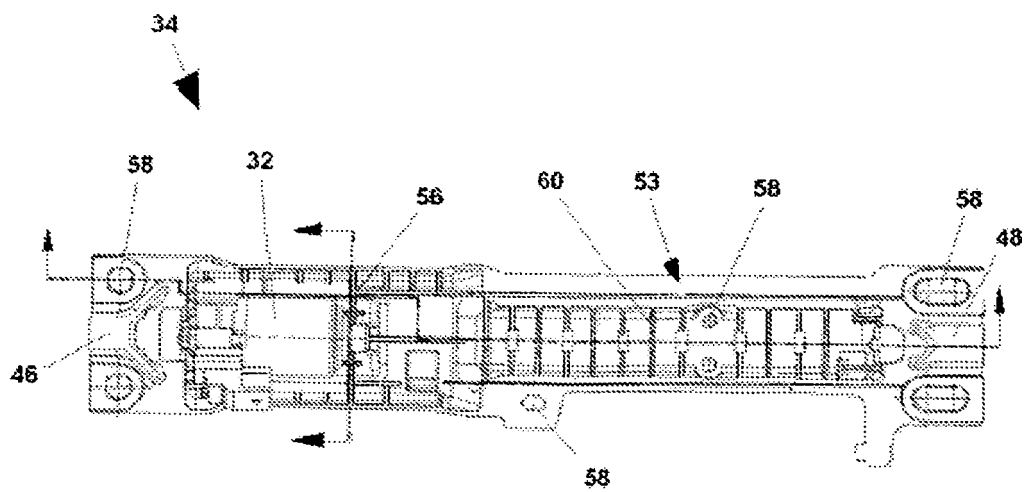


FIG. 7B

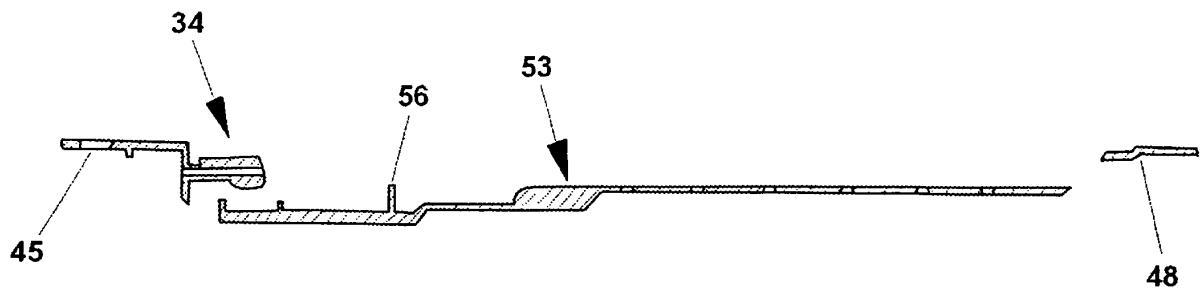


FIG. 7C

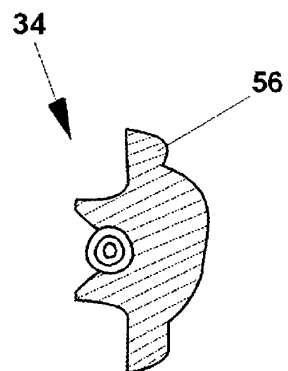


FIG. 7D

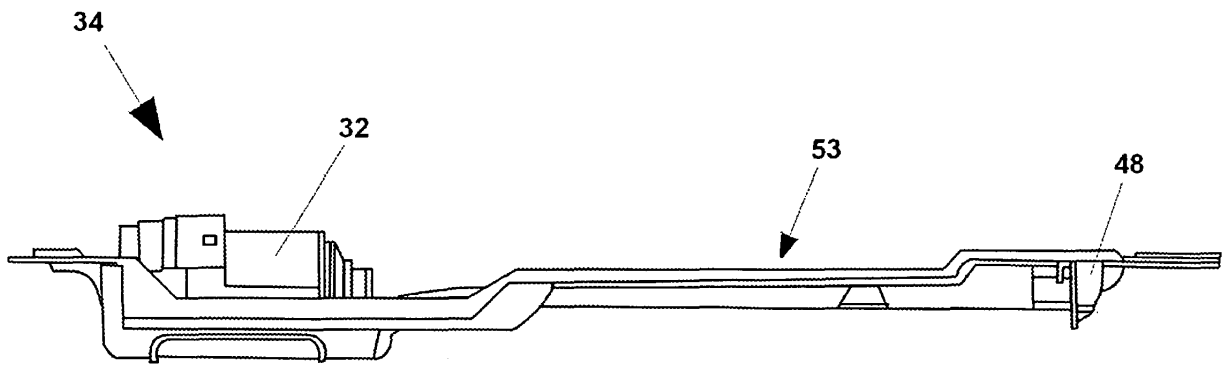


FIG. 7E

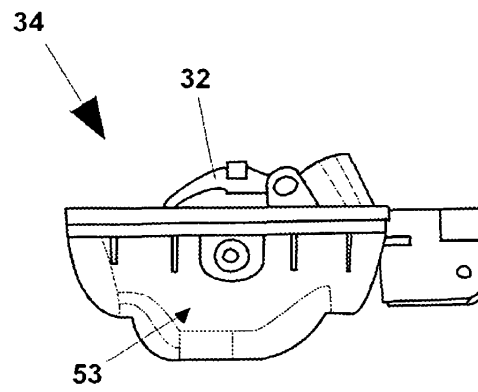


FIG. 7F

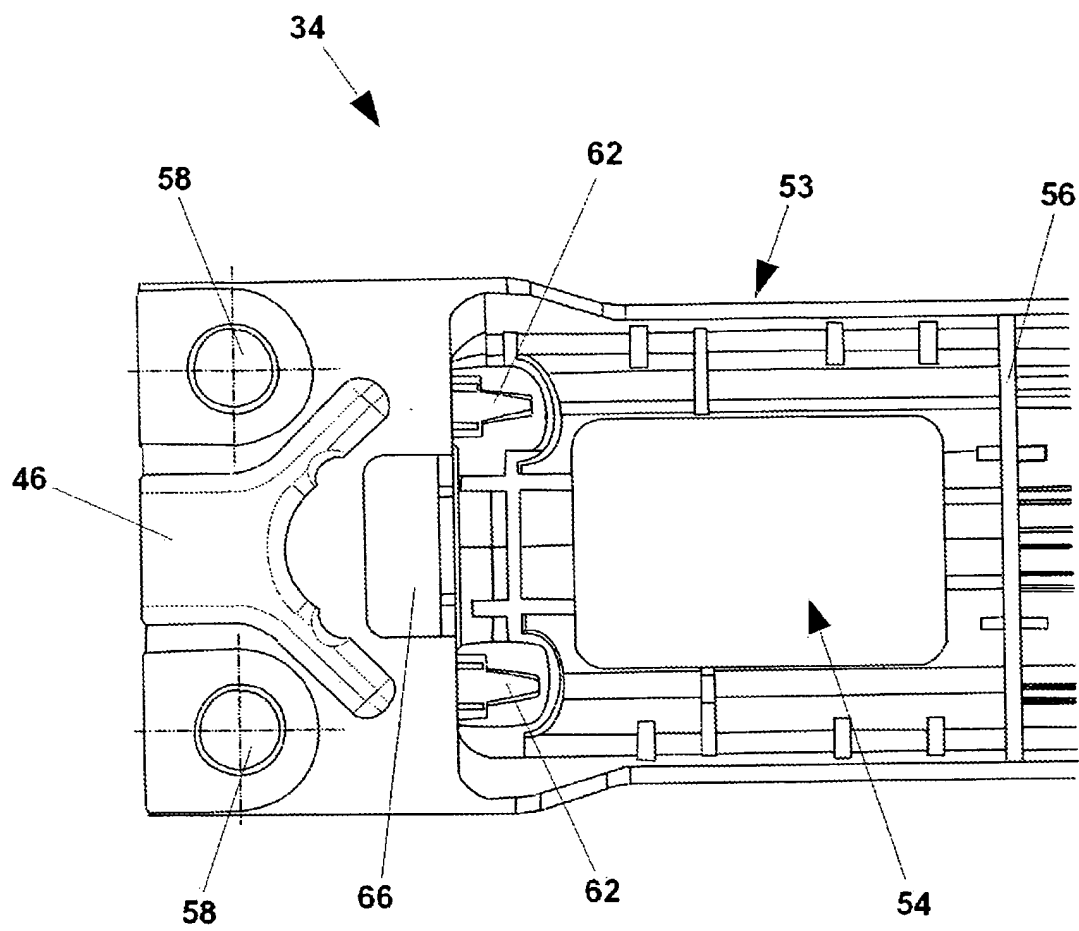
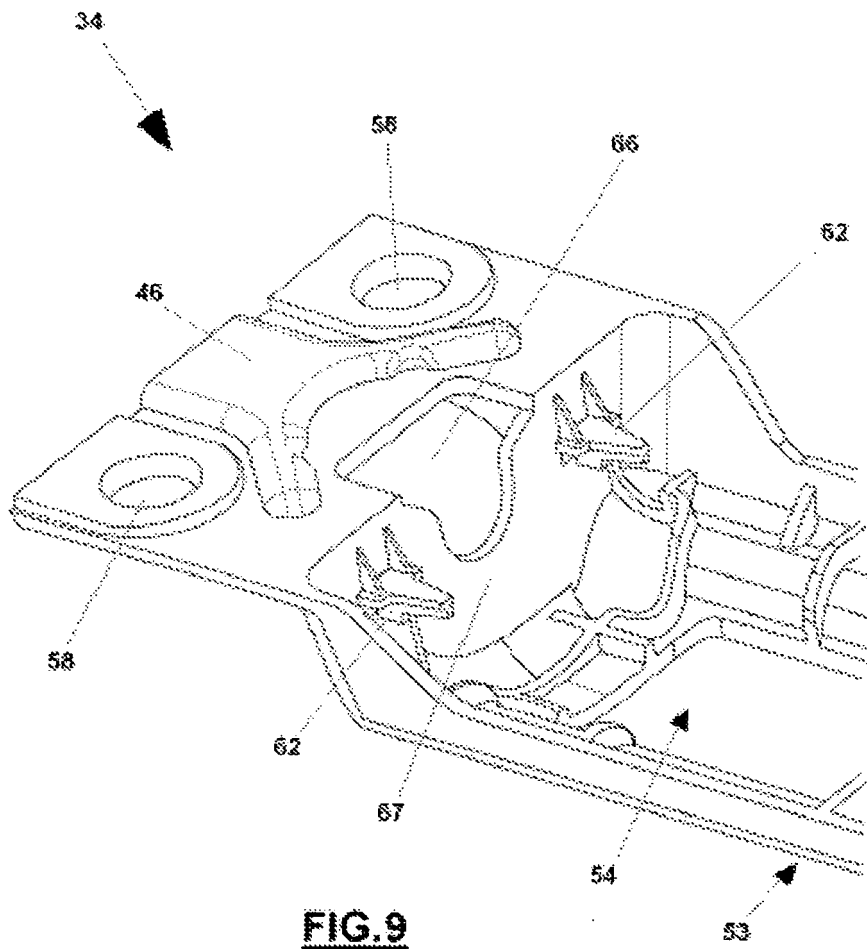


FIG. 8



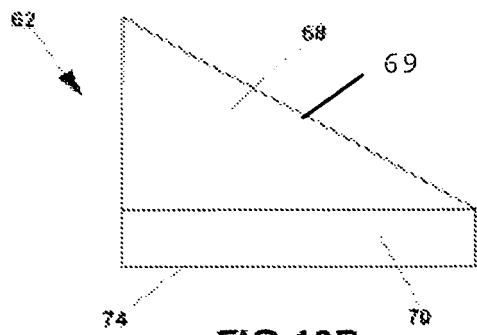


FIG. 10B

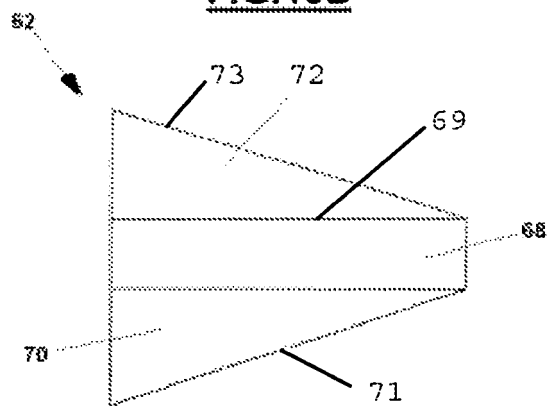


FIG. 10C

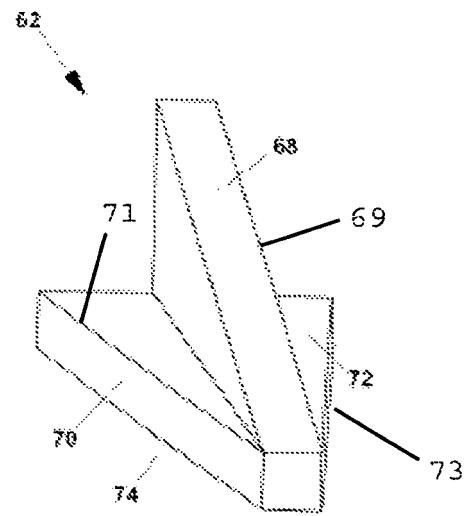


FIG. 10A

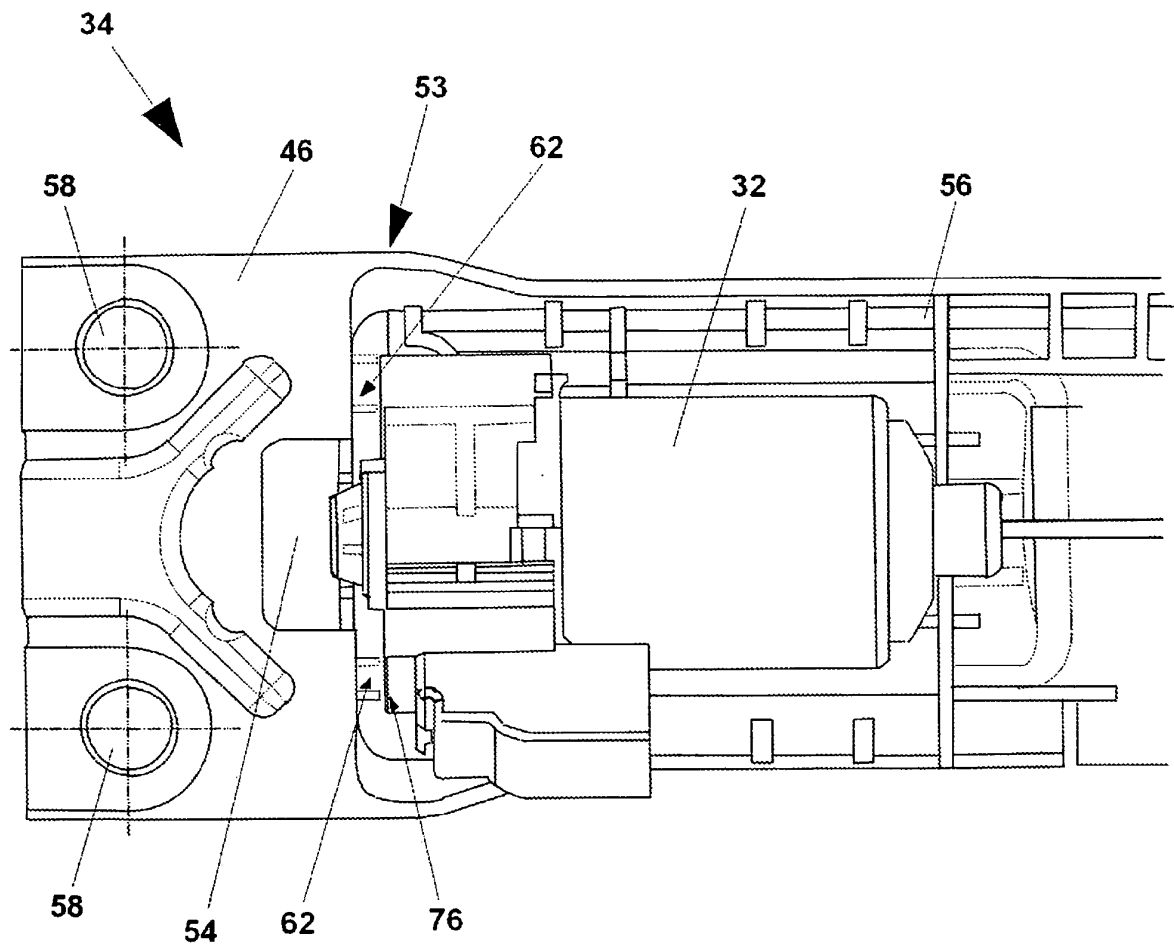


FIG.11

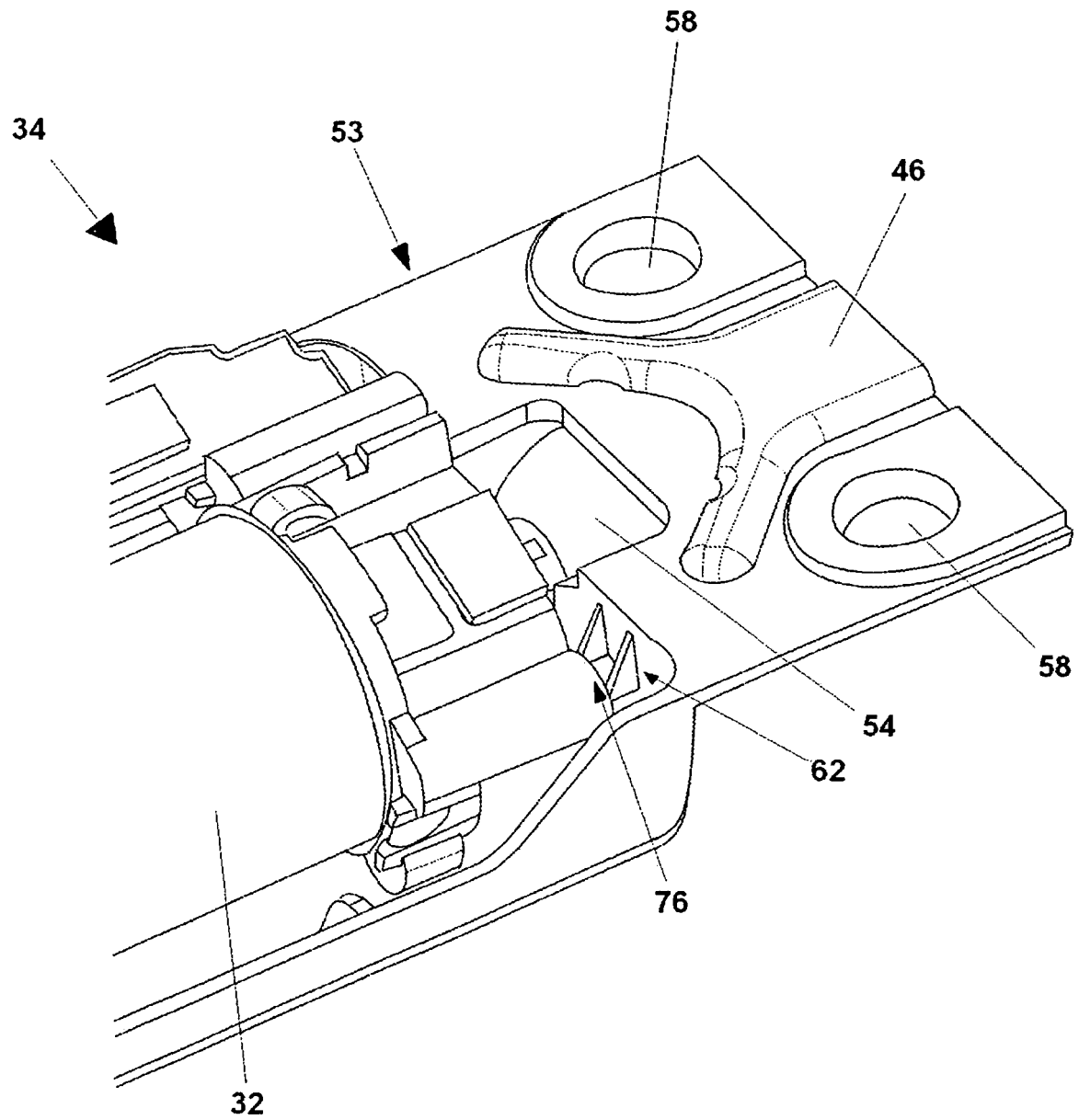


FIG.12

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- FR 2883810 [0004]
- FR 2808483 [0005]
- US 200810163708 A1 [0006]